

Amendments to the Specification:

Please amend the paragraph beginning on page 3, at line 6 as shown below:

In light of the above problems, the inventors devised a card issuing system and a card issuing method which can issue IC cards, on which specific information and personal information are written, in real time with customers' sense of safety and security being secured even in business bases in any security environments without requiring the two steps of storing writing data and writing the stored writing data into IC cards in a conventional issuing system.

Please amend the paragraph beginning on page 3, at line 14 as shown below:

[[The]] A first embodiment of the invention ~~described in claim 1 is~~ provides a card issuing system comprising a card issuing center for storing card writing data including specific information such as a card number and/or personal information prepared based on a request for IC card application from a customer, and a base for receiving the card writing data from the card issuing center via a network, writing them into the IC card and issuing the IC card, wherein the card issuing center has a center communication means for transmitting the customer's card writing data to the base via the network, and the base has a card communication mediate means for receiving the card writing data from the center communication means and transmitting the card writing data to the IC card connected to a terminal without storing them in the terminal of the base, thereby securing security of the specific information and/or the personal information included in the card writing data.

Please amend the paragraph beginning on page 4, at line 13 as shown below:

[[The]] A second embodiment of the invention ~~described in claim 5 is~~ provides a card issuing system comprising a base for writing card writing data including specific information such as a customer's card number and/or personal information into an IC card and issuing the IC card to the customer, wherein a terminal has a card communication mediate means for receiving the customer's card writing data from a card issuing center via a network, transmitting the customer's card writing data to the IC card connected to the terminal without storing the card writing data in the terminal in the base, and transmitting a result of writing into the IC card to the

card issuing center via the network, and wherein the card writing data are received from the card issuing center securely by communication with the card issuing center.

Please amend the paragraph beginning on page 4, at line 27 as shown below:

[[The]] A third embodiment of the invention ~~described in claim 9 is~~ provides a card issuing method which is used by a card issuing center for storing card writing data including specific information such as a card number and/or personal information prepared based on a request for IC card application from a customer, and a base for receiving the card writing data from the card issuing center via a network and writing them into the IC card so as to issue the IC card, wherein the card issuing center transmits the customer's card writing data to the base via a network, the base receives the card writing data from the card issuing center and transmitting them to the IC card connected to a terminal without storing the card writing data in the terminal in the base, thereby securing security of the specific information and/or the personal information included in the card writing data.

Please amend the paragraph beginning on page 5, at line 22 as shown below:

[[The]] A fourth embodiment of the invention ~~described in claim 13 is~~ provides a card issuing method which is used by a base for writing card writing data including specific information such as a customer's card number and/or personal information into an IC card so as to issue the IC card to the customer, wherein the customer's card writing data are received from a card issuing center via a network and are transmitted to the IC card connected to a terminal without storing the data in the terminal in the base, and a result of writing into the IC card is transmitted to the card issuing center via the network, and wherein the card writing data are received from the card issuing center securely by communication with the card issuing center.

Please amend the paragraph beginning on page 6, at line 5 as shown below:

According to the first through fourth embodiments of the invention ~~inventions described in claims 1, 2, 5, 9, 10 and 13~~, a step and a means that store the card writing data into the terminal are deleted from the conventional two card writing steps, so that the data can be written directly into the IC card in the base. For this reason, the security of the specific

information such as a card number and the personal information is secured in the bases, and the IC card can be issued in real time.

Please amend the paragraph beginning on page 6, at line 13 as shown below:

[[The]] A fifth embodiment of the invention ~~described in claim 3 is~~ provides a card issuing system having in the card issuing center a log management database for storing a communication result such that the card writing data have been transmitted from the card issuing center to the base and for receiving the card writing data, and for receiving the result of writing into the IC card from the base so as to store it.

Please amend the paragraph beginning on page 6, at line 20 as shown below:

[[The]] A sixth embodiment of the invention ~~described in claim 11 is~~ provides a card issuing method, wherein a communication result such that the card writing data have been transmitted from the card issuing center to the base is stored in a log management database in the card issuing center, the card writing data are received, and a result of writing into the IC card is received from the base so as to be stored in the log management database.

Please amend the paragraph beginning on page 6, at line 28 as shown below:

According to the fifth and sixth embodiments of the invention ~~inventions described in claims 3 and 11~~, the communication result between the card issuing center and the base can be managed, and the data can be written into the IC card securely.

Please amend the paragraph beginning on page 7, at line 2 as shown below:

[[The]] A seventh embodiment of the invention ~~described in claim 4 is~~ provides a card issuing system, wherein the card issuing center has a control terminal authentication means for determining availability of an access to the card issuing center from the terminal in the base based on a control terminal authentication database in which authentication information specific to the terminal is stored.

Please amend the paragraph beginning on page 7, at line 9 as shown below:

[[The]] An eighth embodiment of the invention ~~described in claim 12 is~~ provides a card issuing method, wherein availability of an access to the card issuing center from a terminal in the base is determined based on a control terminal authentication database in which authentication information specific to the terminal is stored.

Please amend the paragraph beginning on page 7, at line 15 as shown below:

According to the seventh and eighth embodiments of the invention ~~inventions described in claims 4 and 12~~, an unauthenticated access to the card issuing center is prevented, and the IC card can be issued securely only in the authenticated bases.

Please amend the paragraph beginning on page 7, at line 19 as shown below:

[[The]] A ninth embodiment of the invention ~~described in claim 6 is~~ provides a card issuing system, wherein the terminal has a reader/writer authentication means for determining availability of an access to the terminal from a card reader/writer for writing the card writing data into the IC card based on a reader/writer authentication database into which authentication information specific to the card reader/writer is stored.

Please amend the paragraph beginning on page 7, at line 27 as shown below:

[[The]] A tenth embodiment of the invention ~~described in claim 14 is~~ provides a card issuing method, wherein the availability of an access to the terminal from a card reader/writer for writing the card writing data into the IC card is determined based on a reader/writer authentication database in which authentication information specific to the card reader/writer is stored.

Please amend the paragraph beginning on page 8, at line 4 as shown below:

According to the ninth and tenth embodiments of the invention ~~inventions described in claims 6 and 14~~, the use of an unauthenticated card reader/writer can be prevented, and the authenticated card reader/writer can carry out the writing into the IC card securely.

Please amend the paragraph beginning on page 8, at line 8 as shown below:

[[The]] An eleventh embodiment of the invention ~~described in claim 7~~ is provides
a card issuing system, wherein the IC card is determined as authenticated or unauthenticated by
using a key which is the same as an access key stored in the IC card.

Please amend the paragraph beginning on page 8, at line 12 as shown below:

[[The]] A twelfth embodiment of the invention ~~described in claim 15~~ is provides
a card issuing method, wherein the IC card is determined as being authenticated or
unauthenticated using a key which is the same as an access key stored in the IC card.

Please amend the paragraph beginning on page 8, at line 16 as shown below:

According to the eleventh and twelfth embodiments of the invention ~~inventions~~
~~described in claims 7 and 15~~, the writing of data into an unauthenticated IC card can be prevented,
and the writing into an authenticated IC card can be carried out securely.

Please amend the paragraph beginning on page 8, at line 20 as shown below:

[[The]] A thirteenth embodiment of the invention ~~described in claim 8~~ is provides
a card issuing system, wherein a new IC card is issued to a customer or personal information and
application programs in an issued IC card are rewritten in the base.

Please amend the paragraph beginning on page 8, at line 24 as shown below:

[[The]] A fourteenth embodiment of the invention ~~described in claim 16~~ is provides
a card issuing method, wherein a new IC card is issued to a customer or personal information and
application programs in an issued IC card are rewritten in the base.

Please amend the paragraph beginning on page 8, at line 28 as shown below:

According to the thirteenth and fourteenth embodiments of the invention
~~inventions described in claims 18 and 16~~, not only the process for issuing a new IC card but also
the process for rewriting IC card can be executed in real time in the bases while the security is
being secured.

Please amend the paragraph beginning on page 10, at line 14 as shown below:

In the card issuing system, a card issuing center 1 of a service providing business entity such as a card company in a high-security environment communicates with a business base 2 of the service providing business entity in a comparatively low-security environment via a dedicated line 3, and IC cards (hereinafter cards) of customers are issued in the business base 2. The business bases 2 are opened in all corners of the country and ~~functions~~ function as a counter for the customers, and it ~~includes~~ include branch offices and subcompanies of the service providing business entity, and may include not only offices along streets but also offices in department stores and in station yards.

Please amend the paragraph beginning on page 11, at line 5 as shown below:

Hereinafter, the case which uses the dedicated line 3 is explained, but a network line where a leakage to a third ~~part~~ party is difficult, a network line where decryption of various information using encryption techniques by the third party is impossible, and the like may be used instead of the dedicated line 3. Further, it is not necessary to always use one network for a case where a card writing result is received from the business base 2, mentioned later, and for a case where card writing data are transmitted from the card issuing center 1 to the business base 2.

Please amend the paragraph beginning on page 15, at line 10 as shown below:

The encryption and decoding process by means of the cipher decoding means 212 and the key information database 213 is not necessarily owned by the control terminal 21 of the business ~~bases~~ base 2. The writing data encrypted by the cryptography key for writing is firstly transmitted to the card communication mediate means 211 of the control terminal 21 in the writing data encryption means 14 in the card issuing center 1. The card issuing center 1 accesses to the card medium 23 using the access key held by the cryptography key database 15 in the card issuing center 1, so that the writing data may be directly written into the card medium 23. In this case, the card communication mediate means 211 of the control terminal 21 simply mediates between the card issuing center 1 and the card medium 23.

Please amend the paragraph beginning on page 17, at line 18 as shown below:

The center communication means 11 receives the access request from the control terminal 21, and the control terminal authentication means 12 checks whether a matched IP address is present in the control terminal authentication database 13 using an IP address specific in the control terminal 21 and accessed dedicated line numbers. The center communication means 11 allows the access of the control terminal 21 (S220). In the case of unauthenticated access where the IP addresses are different or the access is not via the ~~dedicate~~ dedicated line 3, the access is not allowed, and the center communication means 11 notifies the control terminal 21 of the impossibility of the card issuance (S310).

Please amend the paragraph beginning on page 18, at line 8 as shown below:

The center communication means 11 connects the card reader/writer 22 of the business ~~bases~~ base 2 to the control terminal 21, and requests the card communication mediate means 211 to insert the card into the card reader/writer 22 (S240). Every communication between the center communication means 11 and the card communication mediate means 211 is displayed on the input/output terminal 214 in real time.

Please amend the paragraph beginning on page 19, at line 5 as shown below:

When the center communication means 11 receives the insertion of the ~~car~~ card medium 23 and the inserted card medium 23 being authenticated from the card communication mediate means 211, the writing data encryption means 14 encrypts the writing data of the customer stored in the writing information database 16 so as to transmit the encrypted writing data (S270).

Please amend the paragraph beginning on page 19, at line 11 as shown below:

The card communication mediate means 211 receives the encrypted writing data, and the cipher decoding means 212 decodes the writing data according to a decoding key in the key information database 213 which is ~~pared~~ paired with the cryptography key encrypted in the card issuing center 1. The writing data are encrypted by using the cryptography key which is necessary for writing the writing data into the card medium 23, and are transmitted to the card

reader/writer 22, so as to be written into the inserted card medium 23 (S280). At this time, the writing data are not stored in the control terminal 21 and the card reader/writer 22, and the writing data are subjected to the encrypting/decoding process and are written into the card medium 23 in real time.

Please amend the paragraph beginning on page 20, at line 15 as shown below:

When writing data still ~~remain~~ remains in the writing information database 16, a check is made that a result such that the writing data previously transmitted are written into the card medium 23 securely is received from the card communication mediate means 211. Thereafter, next writing data are transmitted from the center communication means 11 to the card communication mediate means 211 (S300). In the case of the final writing data, the writing data, to which a graph or the like which clarifies that they are the final data is attached, are transmitted.

Please amend the Abstract on page 30 as follows (a replacement Abstract as amended is attached herewith):

ABSTRACT

Security of an IC card containing customer's personal information is secured and the IC card is issued in real time even in bases of a card company in any security environments. A card issuing center [[1]] has a center communication means [[11]] for transmitting customer's card writing data to a base [[2]], and the base [[2]] has a card communication mediate means [[211]] for receiving the card writing data from the center communication means [[11]] and transmitting the card writing data directly to an IC card medium [[23]] connected to a terminal [[21]] without storing the data writing data in the terminal [[21]] of the base [[2]].